

Summer 10-6-2011

# OPEN ACCESSIBILITY TO INFORMATION SYSTEMS RESEARCH ARTICLES

Bo-Christer Björk

Patrik Welling

Mikael Laakso

Follow this and additional works at: <http://aisel.aisnet.org/ecis2011>

---

## Recommended Citation

Björk, Bo-Christer; Welling, Patrik; and Laakso, Mikael, "OPEN ACCESSIBILITY TO INFORMATION SYSTEMS RESEARCH ARTICLES" (2011). *ECIS 2011 Proceedings*. 149.  
<http://aisel.aisnet.org/ecis2011/149>

This material is brought to you by the European Conference on Information Systems (ECIS) at AIS Electronic Library (AISeL). It has been accepted for inclusion in ECIS 2011 Proceedings by an authorized administrator of AIS Electronic Library (AISeL). For more information, please contact [elibrary@aisnet.org](mailto:elibrary@aisnet.org).

# OPEN ACCESSIBILITY TO INFORMATION SYSTEMS RESEARCH ARTICLES

Björk, Bo-Christer, Hanken School of Economics, Arkadiankatu 22, 00101, Helsinki, Finland, bo-christer.bjork@hanken.fi

Welling, Patrik, Hanken School of Economics, Arkadiankatu 22, 00101, Helsinki, Finland, patrik.welling@hanken.fi

Laakso, Mikael, Hanken School of Economics, Arkadiankatu 22, 00101, Helsinki, Finland, mikael.laakso@hanken.fi

## Abstract

*With increasing frequency journal articles are retrieved digitally rather than by obtaining physical printed volumes. This shift to low-cost distribution of research literature has opened up new possibilities for increasing the accessibility and potential readership of published literature. Open Access is a term used to refer to publication of scholarly material without access restrictions, which can be realized either by the publisher directly or indirectly by the author. This paper studies the extent to which information systems research is available Open Access. The results are also contrasted to figures from other areas of science.*

*By sampling journals within the field, systematically looking for free copies through a web search engine, the extent of peer-reviewed IS research was studied. The results indicate that none of the IS journals included in a large citation indexing service covering 18000 journals are fully Open Access, but this is something which is compensated for by authors being quite active in uploading copies of their manuscripts to web sites. There was no significant difference in Open Access patterns between the top journals in the discipline and the rest of the sample. The overall share of Open Access within the field is 21 %.*

*Keywords: Open access, information systems, journals, articles, publishing*

## 1.1 Introduction

Open Access (OA) is a term used to refer to free unrestricted access of scientific publications and data in electronic format retrievable over the Internet. For good overviews of the subject see for example Suber (2010) or Willinsky (2005). The term Open Access was coined in 2002 at a meeting in Budapest (BOAI 2002), but the concept has existed since the earliest days of the Internet (Harnad 1995). As soon as the web emerged many scientists rapidly saw its potential for making the sharing of scientific information, in particular peer reviewed journal articles, more efficient.

Free unrestricted access is sometimes used to mean not only access for readers, but also for systems for data mining and indexing (Wilbanks 2006). Creative Commons licenses (Creative Commons 2010), which have strong similarities to the licenses used for Open Source software, are often used to define what readers can do with the articles published in OA journals.

OA is related to a number of rather similar phenomena that have emerged along with the widespread adoption of the Internet such as Open Source, Open Content, Peer Production, Social Media etc. (Benkler 2006). An important feature distinguishing the subject domain of OA from other publishing industries such as film, music or books is that scientific knowledge can be considered a public good and that the authors who produce scientific information usually do not get any monetary rewards in the form of sales royalties. Consequently, from the content providers viewpoint, the authors and

reviewers, there is no problem with potential piracy - on the contrary, wide dissemination of articles is desirable.

An early successful OA implementation is the arXiv repository, which was founded in 1991 for storage of preprints in high-energy physics and related fields (arXiv 2010), and is now housing more than 600 000 documents. The earliest peer reviewed OA journals started to appear via list servers around the same time and early fully web-based journals include journals such as First Monday, which has published research concerning the Internet as a phenomenon since 1996. In addition to the technology push element there was also a pull element in the form of expensive journal subscription prices, which for many years had risen faster than inflation and which at the end of the 1990s seriously strained the finances of university libraries world wide. Some authors have referred to this price escalation as the serials crisis (Parks 2002).

During the 1990s OA emerged in the form of small-scale voluntary efforts by individual scholars or groups of scholars, but during the first decade of this millennium several innovative publishers have entered the field. This has in particular resulted in the creation of OA journals funded by author charges, for a good overview of the current situation see for example Dallmeier-Tiessen et al (2010). At the same time universities and research organisations have increasingly established institutional repositories, which often use open source software like D-Space and E-prints, and which among other material can be utilised to archive author manuscripts of published articles. Research funders and universities have also started to require that researchers who are funded by them have to store manuscript copies in repositories, for instance in PubMedCentral. Mandates by public research funders such as the NIH in the US have aroused a lot of debate.

The rest of this paper will concentrate on OA related to peer reviewed journal articles. The case for OA is equally strong for conference papers, working papers, research reports as well as data sets, but these are outside the scope of this discussion. For some forms of research output OA has become increasingly established, for instance many Ph.D. theses are published OA.

## **1.2 Main forms of Open Access**

### **1.2.1 Publisher-side OA ("Gold OA")**

Free unrestricted access to the full texts of peer reviewed journal articles can be achieved in two major ways. Firstly, the scientific journals themselves can start using business models that enable the end product, at least in digital format, to be made free for readers. To keep costs low, open source publishing platforms and volunteer workforce is often used. Funding can be based on author article charges, advertising, grants or other alternative income sources. In this model the electronic version of the article is available directly from the publisher's site. In the jargon of the OA community this is called the gold route to OA (Harnad et al 2004). There are a number of variations to Gold OA:

**Direct OA** - The most straightforward one is where all the content of the journal is available for free immediately as it gets published. These journals are usually indexed in the Directory of Open Access Journals, currently listing some 5500 journals (DOAJ 2010).

**Delayed OA** - Some established publishers make the electronic version freely available after a delay of typically one year. An example is provided by Highwire Press, which offers delayed OA access to the electronic contents of almost 300 high impact journals (Highwire Press 2010).

**Hybrid OA** - For around 2000 scientific journals, representing around a quarter of the total journal portfolio of the twelve biggest scientific journal publishers, the author can open up his article in an otherwise subscription-based journal by paying the publisher an extra OA charge of typically around

3000 USD. So far the uptake by authors of this option has been very low, only around 2 % of authors of eligible articles are willing to pay the extra cost (Dallmeier-Tiessen et al 2010)

The bigger specialised OA publishers have developed technical publishing platforms of their own, with clear scale advantages. Of the 5 400 OA journals listed in the DOAJ index more than 3 000 are published by organisations which only publish one journal, often universities, university departments, or scientific societies. Within this category there is a strong case for using open source solutions, in contrast to the in-house software which dominated in the early years, and the Open Journals System seems to be emerging as a de-facto standard (Edgar and Willinsky 2010).

OA journal publishing has been of particular interest to society journals in countries outside the US and the UK, often publishing in national languages. In many countries society journals are subsidized by the government, in view of their important social function and lack of a commercial subscription markets. In Canada the Social Sciences and Humanities Research Council recently changed their subsidy rules so that open access publishing is no longer penalized by rules that require subscription income from journals to become eligible for support. In other countries such journals receive implicit support via national OA journal portals they can use for no cost such as Scielo (Latin America, 638 journals), J-Stage (Japan, 619 journals) and Hrcak (Croatia, 208 journals).

The low costs involved in starting a web-based journal coupled with the attractive business prospect of author-charges has lead to some publishers with weak support from the scientific community and substandard peer review standards to enter the market (Davis 2009). However, such publications are likely to be weeded out quite rapidly by a lack of submitted manuscripts.

### 1.2.2 Manuscript copies ("Green OA")

As an alternative to OA mechanisms offered by the journals, authors can also upload their manuscripts to Internet servers where potential readers without subscription can access them. This is often referred to as green OA (Harnad et al 2004).

The three major options are on the homepages of the author or his department, in an institutional repository of the author's employer, or in a subject-specific repository. Homepages were the dominant choice in the early days but suffer from high risks of the material disappearing as authors change jobs, web page structures are reshuffled etc. Subject-based global repositories have become the prime choice in some disciplines, however, well-established repositories are not available for all fields. The number of institutional repositories is quickly growing and has exceeded over a thousand by now (ROAR 2010, DOAR 2010).

Contrary to common beliefs among academics, the majority of scientific journals explicitly allow green OA in their copyright agreements, but usually not for the exact published versions. Some journals allow the posting of the author's personal version in a subject-specific repository after a delay of say six months. In other cases the copyright agreement allows personal versions on the authors' own home pages or institutional repositories, but excludes subject specific ones (for instance all Elsevier journals). In some cases there are considerable embargo periods with delays (for example the European Journal of Information Systems has an embargo period of 18 months).

McVeigh (2004) studied the copyright policies of the journals included in the Science edition of ISI Journal Citation Reports, using the Sherpa/Romeo database on copyright policies as a resource. She found that in the subset of 58 % of all journals for which a clear copyright policy concerning green OA could be found, only 10 % of the journals did not allow any sort of uploading of manuscript copies

to web pages or repositories. 6 % of the journals were Open Access in any case, and 65 % allowed the posting of the author's version after the review process.

### **1.3 Authors decide if OA becomes popular**

The authors of manuscripts for peer reviewed journal articles are in a key position to determine how popular Open Access becomes. The choice an author faces is two-fold. Firstly, selecting which journal to submit a manuscript? Secondly, after the article has been accepted for publishing, is the author willing to make the extra effort to put a copy of the manuscript in a repository? Slightly different decision-making criteria influence these two decision processes in which OA is an option.

The choice between different journals to submit to has been studied by a number of authors and depends on many factors (Rowlands et al 2004, Swan and Brown 2004, Björk and Öörni 2009). For most authors choosing an OA journal for the sake of the open accessibility, even if such an alternative is at hand, is not on the top of the priority list. The impact factor and prestige of the journal, as well as the likelihood of acceptance is in most cases the single most important factor determining where an author submits. In many academic institutions and networks publishing in a few highly regarded journals is of the highest importance.

The choice to upload a green copy is a different kind of choice. In this respect there are two kinds of authors. One quite big group are those who are relatively unaware of this possibility, or who believe that publishers automatically forbid this. The second group are those who are aware of the possibility for uploading and who make a conscious choice to upload or not to upload. One model which would offer a suitable basis for explaining the behaviour of the latter group (Hedlund 2008), is the UTAUT model (Venkatash et al 2003).

Due to the rather low uptake of voluntary uploading of manuscripts to repositories, there is an increasing trend that research funders and universities start to require green posting from authors receiving funding from/working for them (SherpaJuliet 2010, ROARMAP2010). The best-known funders mandates are from the National Institute of Health (USA) and the Wellcome Trust (UK). There are currently more than 100 universities which have issued mandates of some sort (ROARMAP 2010). A recent study has shown that the uptake level for ISI-indexed articles in the repositories of universities which declared mandates a few years ago is around 60 %, to be compared to an uptake of around 15 % in universities without a mandate (Gargouri et al 2010).

In theory it would seem logical that articles, which are available openly, would be downloaded, read and hence cited more often than comparable articles which are not. If such an advantage could be empirically proven it would provide a strong sales argument to promote OA to authors, in particular as an incentive for uploading article copies to repositories. Since the seminal work in this area by Lawrence (2001) several dozen such studies of increasing sophistication have been carried out. Two recent summarizing review studies (Swan 2010, Wagner 2010) provide good overviews of the studies and the evidence up to date. An overwhelming majority of the studies have shown the existence of a considerable citation advantage, ranging from 8-600 %, depending on discipline, year of publication, time lag and other factors. Swan only lists 4 out of 31 studies which do not show the advantage and Wagner only 3 out of 46.

## 1.4 How common is Open Access

### 1.4.1 OA status in the major research disciplines

The OA availability of peer reviewed journal articles published in 2008 was studied by Björk et al (2010) by the use of a stratified sample of research disciplines. The method for checking for OA articles or green copies relied on using a popular web search engine and manual OA classification of potentially found full text documents. Of the articles, 8,5% were freely available at the publishers' sites. For an additional 11,9% free manuscript versions could be found using search engines, making the overall OA percentage 20,4%. Figure 1 shows the OA availability per discipline (Björk et al 2010).

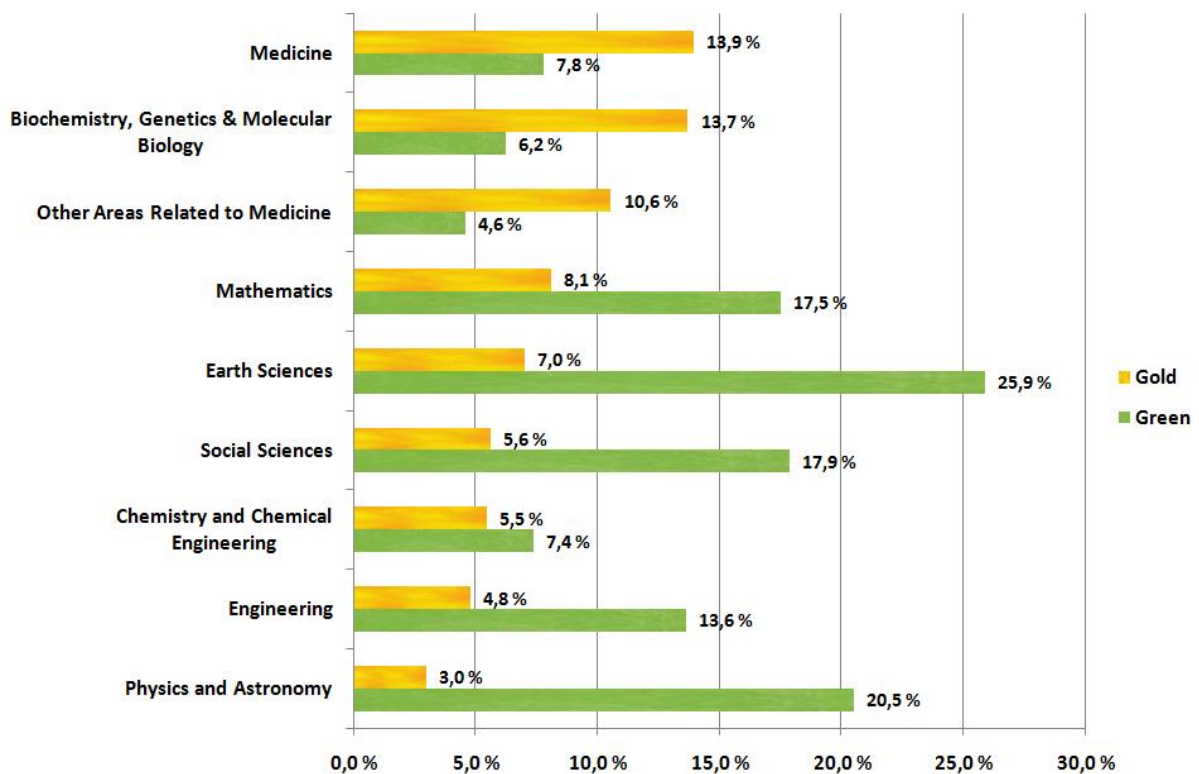


Figure 1. OA availability by discipline

Chemistry (13%) had the lowest overall share of OA, Earth Sciences (33%) the highest. In medicine, biochemistry and chemistry publishing in OA journals was more common. In all other fields author-posted manuscript copies dominated the picture. The reasons for these differences are likely to be found in variations in the supply of suitable OA journals and repositories, in the funding available for paying publications charges, and in the way the publishing cultures have been shaped in each field, as noted already a decade ago by Kling and McKim (2000).

## 1.5 Research aim

The purpose of this paper is to measure the extent to which peer reviewed IS research articles are available openly on the web, classify potentially found articles into OA categories, and contrast the ultimate results to existing results describing OA prominence in other disciplines. Additionally a comparison between what are considered the top 8 journals in the IS field are compared to a sample of

other IS journals to see if there is any difference in the prevalence of different types of OA among the two journal groups.

## 2 The OA situation for Information systems scholarship

To obtain detailed figures for the IS discipline in particular, a sample of IS articles from 2009 was prepared using similar methods to Björk et al (2010). The sampled journals were split into two separate groups. Firstly a small group of 8 high-impact journals, which by a number of leading editors of IS journals have been considered the core journals of the discipline (AIS 2007). Checking for the OA availability of manuscript copies of articles from these journals is of particular interest, since their share of references to the whole body of IS journals is very high. The second, much larger group of journals, was compiled using a number of different sources. The outgoing source was the journals ranking pages available on the ISworld portal (AIS 2007) which lists 125 journals, including the 8 top journals above. Many of the journals on the ISworld list are journals in which IS scholars might publish, but which do not have a focus limited to IS. Journals within such core subjects as management, operations research, and artificial intelligence were dropped from the sample. A further criteria was that the journals must be indexed in Scopus and that they had published articles in 2009, in order that article-level metadata could be compiled for the sample. Due to this further journals were excluded.

Some recently founded journals might not be included in the ISworld list and hence Scopus was used to look for further journals classified under the following subject headings:

- Management Information Systems (within Business, Management and Accounting), 46 journals total
- Information Systems and Management (within Decision Sciences), 33 journals total
- Information Systems (with Computer Science), 121 journals total

Most of these journals proved to be of low relevance for core IS research, with library science journals, journals of medical information systems etc. However, a few relevant journals were added. Lastly a search through the 99 journals listed under management information systems in ISI's Journal Citation Reports was performed, but only one more journal was added as a result of this. 9 OA IS journals are listed in the DOAJ, however, they are not indexed in Scopus and thus not included in this study.

The result was a stratified sample of IS articles from 44 journals. For the top 8 journals all 258 articles were sampled. For the other journals a sample of 540 articles was compiled from the 1540 total published. All article metadata was retrieved from Scopus and then sampled randomly.

TOP JOURNALS	
European Journal of Information Systems	Journal of Management Information Systems
Information Systems Journal	Journal of Strategic Information Systems
Information Systems Research	Journal of the Association of Information Systems
Journal of Information Technology	MIS Quarterly: Management Information Systems
OTHER JOURNALS	
ACM Computing Surveys	Int. Journal of Business Information Systems
ACM Transactions on Information Systems	Int. Journal of Business Intelligence and Data Mining
Behaviour and Information Technology	Int. Journal of e-Business Research
Computer Supported Cooperative Work (CSCW)	Int. Journal of Electronic Commerce

Decision Support Systems	Int. Journal of Electronic Marketing and Retailing
Electronic Commerce Research and Applications	Int. Journal of Enterprise Information Systems
Enterprise Information Systems	Int. Journal of Human Computer Studies
INFOR: Information Systems and Operational Research	Int. Journal of Information and Management Sciences
Information and Management	Int. Journal of Information Management
Information and Organization	Journal of Digital Information Management
Information and Software Technology	Journal of Global Information Management
Information Processing and Management	Journal of Organizational and End User Computing
Information Resources Management Journal	Journal of Organizational Computing and Electronic
Information Systems Management	Journal of Systems and Software
Information Technology and Management	Journal of the ACM
Information Technology and People	Knowledge and Information Systems
Int. Journal of Accounting Information Systems	Wirtschaftsinformatik

Table 3. The journals included in the study

It can be noted of all the journals listed, none is OA. The Journal of Computer Information Systems, which consistently opens up the three first articles in each issue.

The overall results showed an OA share of 21,3 %, split into 0,6 % on the journals web sites (gold) and 20,7 % on personal web sites or in repositories (green). Figure 2 shows the corresponding shares separately for the top 8 journals and the other journals.

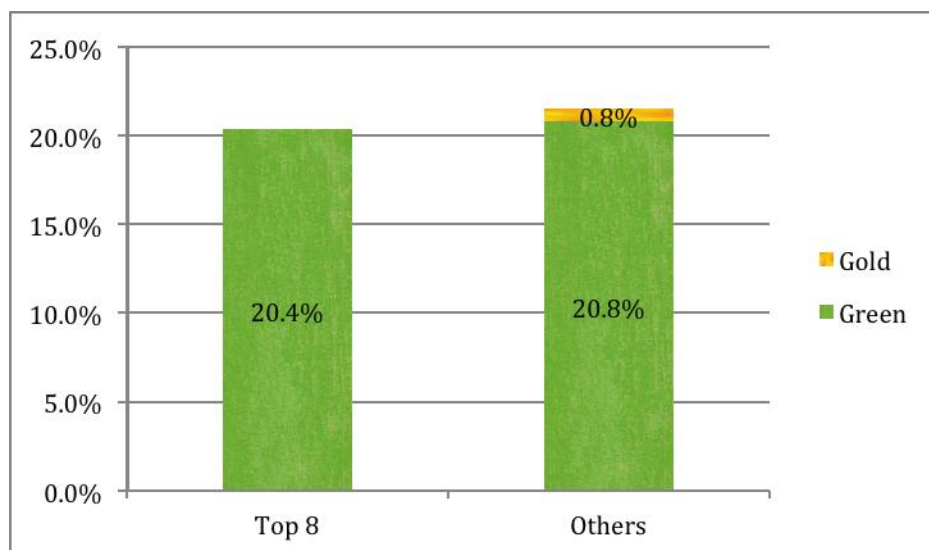


Figure 2. Open Access availability availability of IS articles published in 2009.

The overall OA share is very close to the total multi-disciplinary OA share reported in Björk et al (2010). What is very visible is the very low share of gold OA articles; there were no Direct OA journals in the sample, however, a few were Delayed OA.

The internal split of green copies into types of copies uploaded (38 % exact copies, 46% personal versions and 16 % preprint versions) are very close to the corresponding total multi-disciplinary results reported in Björk et al (2010). Quite a few of the exact copies, which most were found on the authors own web pages, where most likely in breach with copyright agreements. Perhaps the risk of



getting caught is perceived as negligible, and a major publisher suing an individual author is not something that serves as a realistic threat.

An interesting result was that only a minority of the copies were found in systematically curated subject-based or institutional repositories, which would be the preferred long-term archival solution. In this respect the results differ markedly from the total results in Björk et al (2010), which had 43 % in subject-based repositories, 24 % in institutional repositories and 33 % on other web sites.

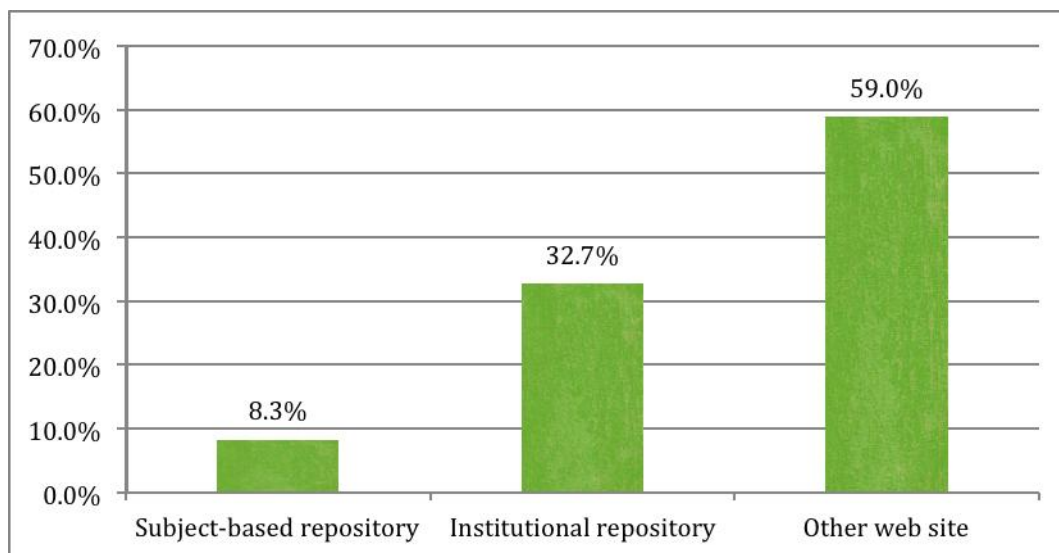


Figure 3. The split of the green IS copies found according to where they were stored.

### 3 Conclusions

This small snapshot of the IS literature shows that the proportion of OA journals and articles is lower than for science in general, but that researchers in the field are already quite active in uploading green copies to web sites. While it would be very useful that new OA journals would emerge and that the existing ones would be strengthened, the straightforward route to quickly increase the global availability would be the green route. There is no lack of suitable repositories for doing this and for the majority of journals where we publish the copyright is not a barrier. The editorial boards of journals, which at the moment have restrictive OA policies, should raise the issue with their publishers. However, the real barrier is awareness of what is possible, with only a modest effort on the part of the author, and that this is in our own best interests.

### ACKNOWLEDGEMENTS

The empirical results presented in this article would not have been possible without the tools produced in the OA-barometer study, funded by the Nordbib research programme, and without the help from colleagues Turid Hedlund and Peter Majlender in carrying out the tedious sampling of the articles.

### REFERENCES

- AIS (2007) Senior Scholars' Basket of Journals, Web page at the ISWorld portal,  
<http://home.aisnet.org/displaycommon.cfm?an=1&subarticlenbr=346>  
ArXiv (2010) Web page, <http://arxiv.org/>

- Benkler, Y. (2006). *The wealth of networks – how social production transforms markets and freedom*. Yale University Press, New Haven, CT
- Björk, B-C., Welling P., Laakso, M., Majlender P., Hedlund T., and Gudnasson, G. (2010). Open Access to the Scientific Journal Literature: Situation 2009. PLoS ONE 5(6): 2010 <http://dx.doi.org/10.1371/journal.pone.0011273>.
- Björk, B-C. and Öörni, A., (2009). A Method for Comparing Scholarly Journals as Service Providers to Authors, *Serials Review*, 35(2), 62-69
- BOAI (2002) Budapest Open Access Initiative, Web page. <http://www.soros.org/openaccess>
- Creative Commons (2010). Web page, <http://creativecommons.org/>
- Dallmeier-Tiessen, S., Goerner, B., Darby, R., Hypoelae, J., Igo-Kemenes, P., Kahn, D., Lambert, S., Lengenfelder, A., Leonard, C., Mele, S., Polydoratos, P., Ross, D., Ruiz-Perez, S., Schimmer, R., Swaisland, M. and van der Stelt, W. (2010). Open Access Publishing - Models and Attributes. SOAP project report. Max Planck Society digital library e-doc server. <http://edoc.mpg.de/478647>
- Davis, P., (2009) Open Access Publisher Accepts Nonsense Manuscript for Dollars. The Scholarly Kitchen Blog, 10.6.2009. <http://scholarlykitchen.sspnet.org/2009/06/10/nonsense-for-dollars/>
- DOAJ (2010). Directory of Open Access Journals. Web page. <http://www.doaj.org/>
- Edgar, B. and Willinsky, J. (2010) A Survey of Scholarly Journals Using Open Journal Systems, *Scholarly and Research Communication*, 1(2) <http://journals.sfu.ca/src/index.php/src/article/view/24/41>
- Gargouri, Y., Hajjem, C., Larivière, V., Gingras, Y., Carr, L., Brody, T. and Harnad, S. (2010) Self-Selected or Mandated, Open Access Increases Citation Impact for Higher Quality Research. PLoS ONE 5(10): e13636.doi:10.1371/journal.pone.0013636
- Harnad, S. (1995). Electronic Scholarly Publication: Quo Vadis?. *Serials Review*, 1995, 21(1), 70-72. OA Copy available at <http://users.ecs.soton.ac.uk/harnad/Papers/Harnad/harnad95.quo.vadis.html>
- Harnad, S., Brody, T., Vallières, F., Carr, L., Hitchcock, S., Gingras, Y., Oppenheim, C., S, Stamerjohanns, H., Hilf, ER. (2004). The Access/Impact Problem and the Green and Gold Roads to Open Access. *Serials Review*, 30(4), 310-314. OA copy available through <http://eprints.ecs.soton.ac.uk/10209/>
- Hedlund, T. (2008) Business school researchers' attitudes towards open access and institutional repositories: a study on user acceptance and user behavior, ELPUB2008. Open Scholarship: Authority, Community, and Sustainability in the Age of Web 2.0 - Proceedings of the 12th International Conference on Electronic Publishing held in Toronto, Canada 25-27 June 2008 / Edited by: Leslie Chan and Susanna Mornati, 15-22, Available at [http://elpub.scix.net/cgi-bin/works/Show?015\\_elpub2008](http://elpub.scix.net/cgi-bin/works/Show?015_elpub2008)
- Highwire Press (2010) Web page. <http://highwire.stanford.edu/lists/freeart.dtl>
- Kling, R. and McKim, G. (2000). Not Just a Matter of Time: Field Difference and the Shaping of Electronic Media in Supporting Scientific Communication, *Journal of the American Society for Information Sciences*, 51(14), 1306-1320.
- Lawrence, S. (2001) "Free online availability substantially increases a paper's impact." *Nature*, 31 May 2001, <http://www.nature.com/nature/debates/e-access/Articles/lawrence.html>
- Mc Veigh, M. (2004) Open Access Journals in the ISI Citation Databases: Analysis of Impact Factors and Citation Patterns – A Citation study from Thomson Scientific", <http://science.thomsonreuters.com/m/pdfs/openaccesscitations2.pdf>
- DOAR (2010). The Directory of Open Access Repositories - OpenDOAR, <http://www.openoar.org/>
- Parks, R. (2002) The Faustian grip of academic publishing, *Journal of Economic Methodology*, 9(3), 317–335
- ROAR (2010) Registry of Open Access Repositories. Web page. <http://roar.eprints.org/>
- ROARMAP (2010). Registry of Open Access Repository Material Archiving Policies. <http://www.eprints.org/openaccess/policysignup/>
- Rowlands, I., Nicholas, D., and Huntington, P. (2004) Scholarly communication in the digital environment: what do authors want? Findings of an international survey of author opinion. CIBER, 2004.

- Sherpa/Juliet (2010). Research funders' open access policies. Web page  
<http://www.sherpa.ac.uk/juliet/>
- Suber, P. (2010). Open Access Overview, Web page,  
<http://www.earlham.edu/~peters/fos/overview.htm>
- Swan, A. and Brown, S. (2004) Report of the JISC/OSI journal authors survey. JISC, 2004
- Swan, A. (2010) "The Open Access citation advantage: Studies and results to date". Technical Report. School of Electronics & Computer Science, University of Southampton.,  
<http://openaccess.eprints.org/index.php?/archives/716-Alma-Swan-Review-of-Studies-on-Open-Access-Impact-Advantage.html>
- Venkatesh, V., Morris, M., Davis, G. and Davis, F. (2003) User acceptance of information technology: Toward a unified view, *MIS Quarterly*, 27(3), 425-478
- Wagner, A. (2010) "Open Access Citation Advantage: An Annotated Bibliography." *Issues in Science and Technology Librarianship*. 60. Winter 2010, <http://www.istl.org/10-winter/article2.html>
- Wilbanks, J. (2006) Another reason for opening access to research, *British Medical Journal* 333, 1306-1308 doi:10.1136/sbmj.39063.730660.F7
- Willinsky, J. (2005) *The Access Principle - The Case for Open Access to Research and Scholarship*, MIT Press, <http://mitpress.mit.edu/catalog/item/default.asp?tid=10611&ttype=2>